

New triples (Φ, H, D) from old ones

First construction: relativization, direct and modified:

Direct: $(D, 0, D)$!

Modified: Under [con] we may *randomize*. If $X = \{x_\nu | \dots\}$, modified strategies are distributions $\alpha = (\alpha_\nu)$ corresponding to mixtures $\sum \alpha_\nu x_\nu$. New complexity: $(\alpha, y) \curvearrowright \sum \alpha_\nu D(x_\nu, y)$.

If compensation identity holds, entropy becomes $\sum \alpha_\nu D(x_\nu, \bar{x})$ (*information transmission rate* in classical case).

second construction: *Bayesian* based on *prior* (y_0) .

Replace complexity by *pay-off of updating*:

$$(x, y) \curvearrowright D(x|y_0 := y) = \Phi(x, y_0) - \Phi(x, y) = D(x, y_0) - D(x, y).$$